

5 wherein

X is selected from the group consisting of C=O, S=O, C=S, (C=O)-NH, (C=O)-O and (C=O)-S;

R₁ is selected from the group consisting of:

10 (i) hydrogen, hydroxyl or a hydrocarbon chain of from about 1 to about 10 carbons long selected from the group consisting of saturated, unsaturated and fluorinated, wherein said hydrocarbon chain is unsubstituted or substituted with at least one R¹¹, wherein R¹¹ is selected from the group consisting of:

15 (ia) C₁-C₄ alkyl, C₂-C₄ alkenyl, C₃-C₈ cycloalkyl, C₆-C₁₀ bicycloalkyl or aryl which may be substituted or unsubstituted;

(ib) halogen, cyano, nitro, amino, hydroxy, adamantyl, carbamyl, carbamylloxy or keto;

20 (ic) an oligopeptide of 1-3 amino acid residues; and

(id) NR¹³R¹⁴, CO₂R¹³, O(C=OR¹³), SO₂R¹⁴, SOR¹⁴, (C=O)NR¹³R¹⁴, or NR¹⁴(C=O)R¹³;

wherein:

25 R¹³ is selected from the group consisting of hydrogen, phenyl, benzyl, C₁-C₆ alkyl and C₃-C₆ alkoxyalkyl; and

30 R¹⁴ is selected from the group consisting of hydrogen, hydroxyl, C₁-C₄ alkyl and benzyl,

(ii) an oligopeptide of 1 to 5 amino acids or a peptidomimetic molecule having substantially similar binding properties as the oligopeptide;

35 (iii) C₃-C₆ cycloalkyl, C₆-C₁₀ bicycloalkyl C₃-C₇ cycloalkylmethyl, or C₇-C₁₀ arylalkyl, which may be additionally substituted with R¹¹ as defined above,

R_3 is selected from the group consisting of:

(i) hydrogen, phenyl, hydroxyl, C_1 - C_{12} hydrocarbon chain or O - C_1 - C_{12} hydrocarbon chain which may be additionally substituted with at least one R^{11} as defined above; and

40 (ii) an oligopeptide of 1 to 3 amino acids, an oligopeptide of 1 to 3 amino acids joined to the backbone by an oxygen or a peptidomimetic;

Z is selected from the group consisting of hydrogen, hydroxyl, sulfhydryl, amino, carboxyl and NHR^{11} , wherein R^{11} is defined as above;

45 Z' is selected from the group consisting of:

(i) hydroxyl, amino, carbamido, carbamyl, carbamyoxy or halogen;

(ii) hydrogen; and

(iii) C_1 - C_4 alkyl, C_1 - C_4 alkenyl, C_3 - C_7 cycloalkenyl, or C_1 - C_3 alkoxy which may be additionally substituted with at least one R^{11} as defined above;

50 Y and Y' are independently selected from the group consisting of:

(i) [hydrogen,] halogen, C_1 - C_4 haloalkyl, or C_1 - C_4 haloalkoxy;

(ii) carbamyl, carbamido, cyano, keto, vinyl, sulfoxide, nitro, C_1 - C_3 alkylsulfonyl, or sulfone; and

55 (iii) C_1 - C_3 alkyl which may be additionally substituted with at least one R^{11} as defined above; and

(iv) an oligopeptide of 1 to 3 amino acids or a peptidomimetic;

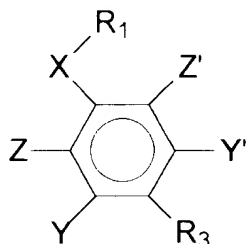
alternatively Z' and R_1 collectively form a ring system selected from the group consisting of:

(a) C_5 - C_8 carbocyclic ring which may be saturated or unsaturated, and which may be additionally substituted with at least one R^{11} as defined above; and

60 (b) C_5 - C_{10} heterocyclic ring system which may be saturated or unsaturated and which includes at least one nitrogen, oxygen or sulfur atom, and which may be additionally substituted with at least one R^{11} as defined above;

and pharmaceutically acceptable salts thereof; with the proviso that when $X-R_1$ is a fluorinated keto acyl, Z is hydrogen.

13. (Once Amended) [The] A method for the treatment of a disease caused [bya] by a picornavirus species [according to Claim 8], wherein said compound [having] has the formula:



5 wherein X is $-\text{C}=\text{O}$;

R₁ is $-\text{CF}_3$;

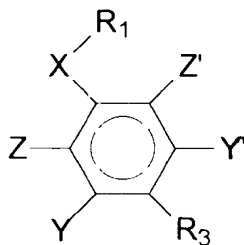
Z and Z' are hydroxyl, except when X-R₁ is a fluorinated keto acyl group, Z must be hydrogen;

R₃ is hydrogen;

10 Y and Y' are selected from the group consisting of $-\text{Cl}$, $-\text{I}$, $-\text{Br}$, $-\text{CF}_3$, $-\text{F}$, $-\text{CN}$, $-\text{COOH}$, $-\text{SO}_3\text{H}$, $-\text{SO}_2\text{NH}_2$ and $-\text{CONH}_2$; and

and Z' and R₁ cannot form a ring.

14. (Once Amended) [The] A method for the treatment of a disease caused [bya] by a picornavirus species [according to Claim 8], wherein said compound [having] has the formula:



5 wherein X is $-\text{C}=\text{O}$;

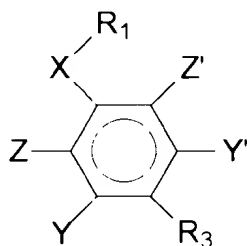
R₁ is $-\text{CF}_3$;

Z is hydroxyl, except when X-R₁ is a fluorinated keto acyl group, Z must be hydrogen;

Z' and R₃ are hydrogen;

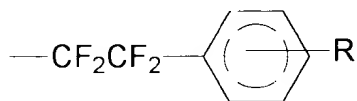
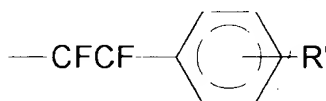
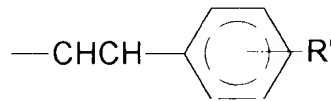
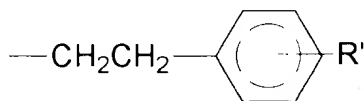
- Y and Y' are selected from the group consisting of -Cl, -I, -Br, -CF₃, -F, -CN, -
 10 COOH, -SO₃H, -SO₂NH₂ and -CONH₂; and
 and Z' and R₁ cannot form a ring.

15. (Once Amended) [The] A method for the treatment of a disease caused [bya]
 by a picornavirus species [according to Claim 8], wherein said compound [having] has the
 formula:



5 wherein X is -C=O;

R₁ is H, -CH[3]₃, -CF₃, CH₃-CH₂-CH₂-CH₂-CH₂-, CH₃-CH₂-, CH₃-CH₂-CH₂-,
 CF₃-CF₂-CF₂-CF₂-CF₂-, -NH-R'' or one of the following phenyl groups



wherein R' is -OH, -NH₂, -COOH, or -COCH₃ and R'' is -OH, -NH₂, -OCH₃ and
 -OCH₂CH₃;

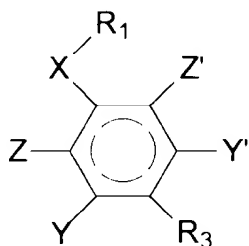
- 10 Z and Z' are hydroxyl, except when X-R₁ is a fluorinated keto acyl group, Z must be
hydrogen;

R₃ is hydrogen;

Y and Y' are -CF₃; and

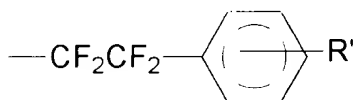
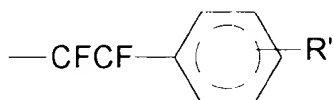
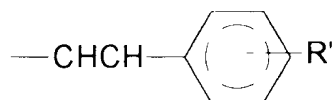
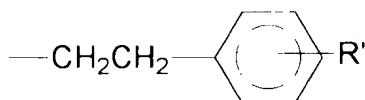
and Z' and R₁ cannot form a ring.--

- 15 16. (Once Amended) [The] A method for the treatment of a disease caused [by] by a picornavirus species [according to Claim 8], wherein said compound [having] has the formula:



- 20 wherein X is $-\text{C}=\text{O}$;

R_1 is H, $-\text{CH}[\text{3}]_3$, $-\text{CF}_3$, $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{CH}_2-\text{CH}_2-$, CH_3-CH_2- , $\text{CH}_3-\text{CH}_2-\text{CH}_2-$, $\text{CF}_3-\text{CF}_2-\text{CF}_2-\text{CF}_2-\text{CF}_2-$, $-\text{NH}-\text{R}''$, or one of the following phenyl groups

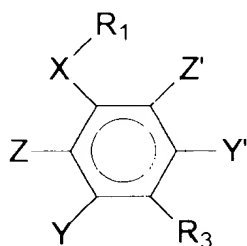


wherein R' is $-\text{OH}$, $-\text{NH}_2$, $-\text{COOH}$, or $-\text{COCH}_3$ and R'' is $-\text{OH}$, $-\text{NH}_2$, $-\text{OCH}_3$ and $-\text{OCH}_2\text{CH}_3$;

- 25 Z is hydroxyl, except when X- R_1 is a fluorinated keto acyl group, Z must be hydrogen;
 Z' and R_3 are hydrogen,
 Y and Y' are $-\text{CF}_3$; and
 and Z' and R_1 cannot form a ring.

Please add the following new claim:

-- 17. A method for the treatment of a disease caused by a picornavirus species, wherein said compound has the formula:



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X is selected from the group consisting of $-\text{C}=\text{O}-$, $-\text{S}=\text{O}-$, and $-\text{C}=\text{S}-$;

R_1 is selected from the group consisting of:

(i) a hydrocarbon chain which may be unsubstituted or substituted with at least one R^{11} , wherein R^{11} is selected from the group consisting of:

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(ia) $\text{C}_1\text{-C}_4$ alkyl, $\text{C}_2\text{-C}_4$ alkenyl, $\text{C}_3\text{-C}_8$ cycloalkyl, $\text{C}_6\text{-C}_{10}$ bicycloalkyl or aryl which may be substituted or unsubstituted;

(ib) halogen, cyano, nitro, amino, hydroxy, adamantyl, carbamyl, carbamyloxy or keto;

(ic) an oligopeptide of 1-3 amino acid residues; and

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(id) $\text{NR}^{13}\text{R}^{14}$, COR^{13} , $\text{O}(\text{C}=\text{OR}^{13})$, SO_2R^{14} , SOR^{14} , $(\text{C}=\text{O})\text{NR}^{13}\text{R}^{14}$, or $\text{NR}^{14}(\text{C}=\text{O})\text{R}^{13}$;

wherein:

R^{13} is selected from the group consisting of hydrogen, phenyl, benzyl, $\text{C}_1\text{-C}_6$ alkyl, and $\text{C}_3\text{-C}_6$ alkoxyalkyl; and

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R^{14} is selected from the group consisting of hydrogen, hydroxyl, $\text{C}_1\text{-C}_4$ alkyl and benzyl;

R_3 is selected from the group consisting of:

(i) phenyl, hydroxyl, $\text{C}_1\text{-C}_{12}$ hydrocarbon chain and $\text{O-C}_1\text{-C}_{12}$ hydrocarbon chain which may be additionally substituted with at least one R^{11} as defined above;

25

and

(ii) an oligopeptide of 1 to 3 amino acids, an oligopeptide of 1 to 3 amino acids joined to the backbone by an oxygen or a peptidomimetic;

Z is selected from the group consisting of hydrogen, hydroxyl, sulfhydryl, amino, carboxyl, and NHR^{11} , wherein R^{11} is defined as above;